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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,190	11/18/2003	Atsushi Koide	AK-431XX	4133
207	7590	11/18/2005	EXAMINER	
WEINGARTEN, SCHURGIN, GAGNEBIN & LEBOVICI LLP TEN POST OFFICE SQUARE BOSTON, MA 02109			AN, SANG WOOK	
			ART UNIT	PAPER NUMBER
			1732	
DATE MAILED: 11/18/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/716,190	<b>Applicant(s)</b> KOIDE ET AL.	
	<b>Examiner</b> Sang W. An	<b>Art Unit</b> 1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/1/2004</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

- (1) Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding claim 1(b), it is unclear to the examiner how adding the carbon nanomaterial to the core layer resin will control the skin layer thickness.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

- (2) Claim 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Friend et al. (US 2002/0132075) and evidenced by Friend et al (US 6464908). Regarding claim 1, Friend teaches a method for controlling a thickness of a skin layer on a composite product having a skin layer and a core layer, comprising steps of: (a) adding a carbon nanomaterial to either a first thermoplastic resin or a second thermoplastic resin (Pg. 3 Par. 39); (b) injection molding both said resins into a mold together or separately to

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produce said composite product having the skin layer containing said first thermoplastic resin and the core layer containing said second thermoplastic resin (Pg.4 Par. 46).

As to the viscosity modification, Friend et al (US 6464908) discusses the modification of the viscosity of the resin when carbon fibrils are mixed with the polymeric resin (col.3 line 44). Here, Friend suggests using thermoset resins such as polyester as the preferred resin material (col.2 line 48) and mixing less than or equal to 20 wt % of the carbon fibrils (col. 3 line 1) of which the fibrils are observed to modify the viscosity. Similarly, Friend et al (US 2002/0132075) teaches an example where a masterbatch composition containing 15 wt % carbon fibril loading and 85% polybutylene terephthalate (PBT), a polyester, is mixed together. As evidenced by Friend (US 6464908), we would inherently expect the viscosity of the masterbatch to increase upon the addition of carbon fibrils in Friend (US 2002/0132075).

(3) Regarding Claim 2, Friend et al (US 2002/0132075) teaches using antistatic bilayered polymeric structure for packaging electronics where both the first and second layers have antistatic properties (Pg. 4 Par. 49-50). Therefore the examiner has determined that the first and the second resins, in this example, are the "same kind of resin," namely polymers with antistatic properties.

(4) Regarding Claim 3, Friend et al (US 2002/0132075) teaches using different materials for the bilayered polymeric structure (Pg. 5 Par. 57, please note that the examiner has interpreted "with another" to mean two different kinds of resins).

**Conclusion**

(5) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sang W. An whose telephone number is (571) 272-1997. The examiner can normally be reached on Mon-Fri 7AM-3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni can be reached at 571-272-1196. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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**MICHAEL P. COLAIANNI**  
**SUPERVISORY PATENT EXAMINER**